



Standard Guide for Establishing Operating Emergency Medical Services and Management Information Systems, or Both¹

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1. Scope

1.1 The Emergency Medical Services Management Information System (EMS-MIS) serves as a framework for the management and linkage of data documenting the complete emergency episode from onset through the pre-hospital, emergency department, and hospital phases to final discharge. This document establishes a standard guideline for the planning, development, and maintenance of an EMS-MIS framework, including linkage among pre-hospital, hospital, and other public safety or government agencies. The resultant EMS-MIS should be capable of monitoring the compliance of an EMS system with its established system standards, and provide an objective basis upon which different EMS systems can be comparatively evaluated.

1.2 EMS-MIS Goals:

1.2.1 To manage data regarding response to a medical emergency.

1.2.2 To provide a process for obtaining and documenting objective, reliable data.

1.2.3 To provide information that can be used to affect operational changes in an EMS system leading to the delivery of better quality emergency medical care.

1.2.4 To provide information to guide the rational investment of local, state, and national resources to improve and maintain EMS.

1.3 This guide will standardize data needed for decision making at various levels of the EMS system, and offer suggestions as to the appropriate use of this information.

1.4 This guide comments on several possible configurations for information flow and data processing, recognizing that no one configuration is best suited to all circumstances.

1.5 This guide focuses on pre-hospital medical activities, including emergency responses, scheduled transports, and all interinstitutional transfers.

1.6 This guide addresses EMS-MIS techniques applicable to the internal operations of outpatient and inpatient facilities as well as pre-hospital care providers.

1.7 This guide will not address specialized data systems and applications such as trauma registries, but will allow for interfacing with such applications.

1.8 This guide will not address computer-aided dispatch (CAD) systems, nor system status management (SSM) applications, but will allow for interfacing with such applications.

2. Referenced Documents

2.1 ASTM Standards:

E 622 Guide for Developing Computerized Systems²

E 623 Guidelines for Developing Functional Requirements for Computerized Laboratory Systems³

E 624 Guide for Developing Implementation Designs for Computerized Systems³

E 625 Guide for Training Users of Computerized Systems²

E 627 Guide for Documenting Computerized Systems²

E 730 Guide for Developing Functional Designs for Computerized Systems³

E 1113 Guide for Project Definition for Computerized Systems³

E 1239 Guide for Description of Reservation/Registration-Admission, Discharge, Transfer (R-ADT) Systems for Electronic Health Record (EHR) Systems⁴

E 1384 Guide for Content and Structure of an Electronic Health Record (EHR)⁴

F 1177 Terminology Relating to Emergency Medical Services⁵

3. Terminology

3.1 Standard EMS terminology is referenced in Terminology F 1177. Definition of individual data elements is given in 5.3 and 5.4.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *Continuing Medical Education (CME)*—refers to data that identify all continuing medical education activity completed by an EMT in the system.

3.2.2 *Data Flow Diagram (DFD)*—Diagram that partitions system business functions into a series of events that enhances

¹ This guide is under the jurisdiction of ASTM Committee F30 on Emergency Medical Services and is the direct responsibility of Subcommittee F30.03 on Organization/Management.

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² Discontinued; see 1999 *Annual Book of ASTM Standards*, Vol 14.01.

³ Discontinued; see 1993 *Annual Book of ASTM Standards*, Vol 14.01.

⁴ *Annual Book of ASTM Standards*, Vol 14.01.

⁵ *Annual Book of ASTM Standards*, Vol 13.02.